Draft 1 : 060920

Trigger Workshop Action Items 060915

This is a list of the items that I took from the meeting as needing our attention. I have made their descriptions terse but I hope they are clear. I consider establishment of the "red box" group to deal with new architectures after 2009 to be extremely high priority. Comments, additions, corrections are solicited.

Trigger comissioning :

need to arrange fast turnaround from RCF reconstruction while developing triggers and calibrating detectors.

L2 :

Change code to have common operations done in only one place – pedestal subtraction, gain correction

Can we offload the monitoring function and do this on a separate machine as the data becomes available on the disk?

Make sure that each algorithm in use has 24/7 coverage

What is life of L2 after daq1000?

Do we need L2 farm?

Scalers:

Need more robust connection scheme

EMC :

Need faster data transfer to L2 for run8 – DDL? STP?

DAQ1000 :

Can all detectors operate at 1k Hz?

TCU :

Add group0 detector live to last DSM

Need more than 32 simultaneous triggers

Do we need multi-TCD crate capability

TCD :

Do we need to change TCD fanout crate system

DAQ :

Need more than one person covering this

STP :

Do we need to add multiple outputs to the concentrators so we can hose data to more than one L2 CPU?

DSMs :

EMC suffered from low bit count in the DSM tree.

Can we have more threshold bits for the EMCs? (useful for scalers and different triggers)

Multiplicity measure :

UPC group should investigate whether BEMC + EEMC data is better method of detecting low multiplicy events. This would also help understand the break in the ctbsum^1/4 at low M.

CTB :

Boris Grube and Yuri Gorbanov will take charge of the CTB calibration and monitoring for the coming run

TOF:

Do we want to send data (hit list) to L2 via DDL or STP?

Do we need to get timing info and its calibration to L2?

Or are these issues taken care of naturally in the post-DAQ1000 architecture?

VPD:

Need requirements document specifying efficiency and resolution

Need Zv resolution independent of M

Need implementation plan with module list

MTD:

Need to specify connections to trigger and daq for the tests in run7 and the final design

Need to see whether this can serve as a hadronic calorimeter surrogate for high-pt triggers

Poor Mans MTD :

Do we want to use CTB slats as they become available to build MTD-like array outside the steel to allow J/Psi detection from muons in run8?

DCC :

Need to check E(EMCs) vs M(CTB) over full range

Low E :

Does Fermi motion lead to spectator protons in BBC at 8 GeV?

L2,L3,L4 triggers:

Need to form a group to investigate online tracking for triggers – issues include calibration and algorithms

Do we need an L3 for event selection in run7

What is the CPU time excluding IO for reconstructing a central event on RCF